Srivastava, K
10/607690


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STRUCTURE FILE UPDATES:     6 MAR 2006  HIGHEST RN 876011-49-3
DICTIONARY FILE UPDATES:    6 MAR 2006  HIGHEST RN 876011-49-3

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*                                                                    *
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                E KERATINASE/CN 5
L1              8 S E3-10
                E PROTEASE/CN 5
L2           1639 S PROTEASE ?/CN
                E PROTEINASE/CN
L3           4960 S PROTEINASE ?/CN
L4           6407 S L1 OR L2 OR L3
                E PHOSPHORIC ACID/CN 5
L5              1 S E3
                E LACTIC ACID/CN 5
L6              1 S E3
L7              2 S L5 OR L6

FILE 'CAPLUS' ENTERED AT 15:55:26 ON 07 MAR 2006
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FILE COVERS 1907 - 7 Mar 2006 VOL 144 ISS 11
FILE LAST UPDATED: 6 Mar 2006 (20060306/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

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L1	8	SEA FILE=REGISTRY ABB=ON PLU=ON (KERATINASE/CN OR "KERATINASE (BACILLUS LICHENIFORMIS GENE KERB)"/CN OR "KERATINASE (BACILLUS LICHENIFORMIS STRAIN ATCC 53737 GENE KERA)"/CN OR "KERATINASE (MICROSPORUM CANIS GENE MEP3 PRECURSOR)"/CN OR "KERATINASE (MICROSPORUM CANIS GENE MEP3)"/CN OR "KERATINASE (NOCARDIOPSIS STRAIN TOA-1 GENE NAPA PRECURSOR)"/CN OR "KERATINASE (NOCARDIOPSIS STRAIN TOA-1)"/CN OR "KERATINASE (TRICHOPHYTON)"/CN)
L2	1639	SEA FILE=REGISTRY ABB=ON PLU=ON PROTEASE ?/CN
L3	4960	SEA FILE=REGISTRY ABB=ON PLU=ON PROTEINASE ?/CN
L4	6407	SEA FILE=REGISTRY ABB=ON PLU=ON L1 OR L2 OR L3
L5	1	SEA FILE=REGISTRY ABB=ON PLU=ON "PHOSPHORIC ACID"/CN
L6	1	SEA FILE=REGISTRY ABB=ON PLU=ON "LACTIC ACID"/CN
L7	2	SEA FILE=REGISTRY ABB=ON PLU=ON L5 OR L6
L8	1197102	SEA FILE=CAPLUS ABB=ON PLU=ON L4 OR ENZYM## OR KERATINASE OR KERATINOLYTIC OR PROTEASE OR PROTEINASE
L9	37044	SEA FILE=CAPLUS ABB=ON PLU=ON L8 AND (L7 OR LACTIC OR LACTATE OR PHOSPHORIC OR ((DIHYDROGEN OR (H OR HYDROGEN))(W)PHOSPHATE)(5A)(MONOSODIUM OR SODIUM OR NA))
L10	27	SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND ((SLAUGHTERHOUSE OR SLAUGHTER OR ABATTOIR OR POULTRY OR TURKEY OR CHICKEN OR (GALLUS OR G)(W)(GALLUS OR DOMESTIC?) OR FOWL OR MELEAGRIDINAE OR DUCK)(S)(WASTE OR CARCASS?) OR EGGSHELL OR EGG(3A)(SUBSTANCE OR SHELL))
L11	18	SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND ((PROTEIN OR SOYABEAN OR SOYBEAN OR (SOYA OR SOY)(W)BEAN OR PEANUT)(5A)WASTE)
L12	41	SEA FILE=CAPLUS ABB=ON PLU=ON L10 OR L11
L13	4	SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND (EXTRUD? OR EXTRUS? OR EMULS? OR PELLET? OR (HEAT? OR SPRAY?)(5A)(DRIED OR DRY?) OR GRIND?)

L13 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 18 Feb 2005
ACCESSION NUMBER: 2005:141200 CAPLUS
DOCUMENT NUMBER: 142:254568
TITLE: Methods and compositions for increasing the efficacy of biologically-active ingredients such as antitumor agents
INVENTOR(S): Windsor, J. Brian; Roux, Stan J.; Lloyd, Alan M.; Thomas, Collin E.
PATENT ASSIGNEE(S): Board of Regents, the University of Texas System, USA
SOURCE: PCT Int. Appl., 243 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014777	A2	20050217	WO 2003-US32667	20031016
WO 2005014777	A3	20050915		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2502148	AA	20050217	CA 2003-2502148	20031016
EP 1576150	A2	20050921	EP 2003-816736	20031016
EP 1576150	A3	20051102		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.: US 2002-418803P P 20021016
WO 2003-US32667 W 20031016

AB The invention provides methods and compns. for modulating the sensitivity of cells to cytotoxic compds. and other active agents. In accordance with the invention, compns. are provided comprising combinations of ectophosphatase inhibitors and active agents. Active agents include antibiotics, fungicides, herbicides, insecticides, chemotherapeutic agents, and plant growth regulators. By increasing the efficacy of active agents, the invention allows use of compns. with lowered concns. of active ingredients.

IT **7664-38-2, Phosphoric** acid, biological studies
9001-73-4, Papain
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for increasing efficacy of biol.-active ingredients such as antitumor agents)

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 31 Dec 2004
ACCESSION NUMBER: 2005:2016 CAPLUS
DOCUMENT NUMBER: 142:79315
TITLE: Apparatus for natural recycling of **protein waste**
INVENTOR(S): Darling, Jonathan Scott; Darling, Don Scott
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265993	A1	20041230	US 2003-607691	20030630
PRIORITY APPLN. INFO.:			US 2003-607691	20030630

AB An apparatus and process for naturally recycling **poultry carcasses** for use as a nutritional supplement, the apparatus generally consists of four modules: an **enzymic** digest medium mixing assembly that self adjusts for pH; a mobile **grinding** assembly mounted on a truck trailer; a digesting and **emulsifying** assembly which includes a **heated** tank and separator; and a **drying** system. Carcasses are loaded into the **grinder**, and the ground carcasses are pumped into a storage tank with the **enzymic** digest medium to produce a protein soluble mixture The particle size of this mixture is then further reduced, and transported to a centralized and stationary processing plant for digesting and **emulsifying**. The remaining **emulsified** proteins are then dried. The resulting **pellet**-like pieces are uniformly sized for packaging.

IT **50-21-5, Lactic** acid, biological studies
7664-38-2, Phosphoric acid, biological studies
RL: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)
(apparatus for natural recycling of **protein waste**)

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 31 Dec 2004
ACCESSION NUMBER: 2005:2015 CAPLUS
DOCUMENT NUMBER: 142:79314
TITLE: Process for natural recycling of **protein waste**
INVENTOR(S): Darling, Jonathan Scott; Darling, Don Scott
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265950	A1	20041230	US 2003-607690	20030630
PRIORITY APPLN. INFO.:			US 2003-607690	20030630

AB An apparatus for naturally recycling **poultry carcasses** for use as a nutritional supplement consists of four modules: an **enzymic** digest medium mixing assembly that self adjusts for a pH of 4-6; a mobile **grinding** assembly mounted on a truck trailer; a digesting and **emulsifying** assembly which includes a **heated** tank and separator; and a **drying** system. Carcasses are loaded into the **grinder**, and the ground carcasses are pumped into a storage tank with the **enzymic** digest medium to produce a protein soluble mixture The particle size of this mixture is then further reduced, and transported to a centralized and stationary processing plant for digesting and **emulsifying** . The remaining **emulsified** proteins are then dried. The

resulting **pellet**-like pieces are uniformly sized for packaging. The pH level of the **enzymic** digest medium is adjusted by adding **phosphoric** acid or **lactic** acid. The **enzymic** digest medium is prepared by mixing at least one **enzyme**, an inedible **egg substance**, and at least one preservative. The **enzyme** can be **protease** or **keratinase**. The **emulsified** proteins are mixed with a carrier having a high surface area to volume ratio which absorbs moisture, such as ground wheat mids, ground corn mids, or soybean meal.

IT **9001-92-7, Protease 37341-53-0, Keratinase**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(natural recycling of **protein waste**)

IT **50-21-5, Lactic** acid, processes **7664-38-2, Phosphoric** acid, processes
RL: BSU (Biological study, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(natural recycling of **protein waste**)

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 18 Nov 1999
ACCESSION NUMBER: 1999:732961 CAPLUS
DOCUMENT NUMBER: 131:310064
TITLE: Nutrient formulation and process for feeding young poultry and other animals
INVENTOR(S): Ivey, Francis J.; Dibner, Julia J.; Knight, Christopher D.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: U.S., 20 pp., Cont.-in-part of U.S. Ser. No. 597,815, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5985336	A	19991116	US 1996-647719	19960524
US 5928686	A	19990727	US 1995-483297	19950607
CA 2222515	AA	19961219	CA 1996-2222515	19960604
WO 9639862	A1	19961219	WO 1996-US9075	19960604
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
AU 9661539	A1	19961230	AU 1996-61539	19960604
AU 723485	B2	20000831		
EP 831718	A1	19980401	EP 1996-919116	19960604
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, MC, PT, IE				
CN 1191469	A	19980826	CN 1996-195727	19960604
JP 11506617	T2	19990615	JP 1996-501482	19960604
ZA 9604883	A	19970107	ZA 1996-4883	19960607
US 5976580	A	19991102	US 1996-760881	19961206

NO 9705691	A	19971205	NO 1997-5691	19971205
US 6329001	B1	20011211	US 1999-333249	19990615
US 6210718	B1	20010403	US 1999-334968	19990617
US 2004052895	A1	20040318	US 2001-792998	20010226
US 6733759	B2	20040511		

PRIORITY APPLN. INFO.:

US 1995-483297	A2	19950607
US 1996-597815	B2	19960207
US 1996-647719	A	19960524
WO 1996-US9075	W	19960604
US 1996-760881	A3	19961206
US 1999-334968	A3	19990617

AB A nutrient formulation including moisture which is designed for use in poultry and other animals, and a method of feeding it which improves subsequent survival, cumulative feed efficiency and weight gain is disclosed. The method comprises making available for consumption ad libitum a high moisture material containing at least about 20% by weight water to the poultry or other animals before they are offered dry food ad libitum.

IT **7664-38-2, Phosphoric** acid, biological studies
37341-53-0, Keratinase
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(nutrient formulation and process for feeding young poultry and other animals)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

FILE 'MEDLINE' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'BIOSIS' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'EMBASE' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'WPIDS' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'CONFSCI' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'SCISEARCH' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'JICST-EPLUS' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'JAPIO' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'CABA' ENTERED AT 15:55:574 ON 07 MAR 2006

FILE 'AGRICOLA' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'VETU' ENTERED AT 15:55:57 ON 07 MAR 2006

FILE 'VETB' ENTERED AT 15:55:57 ON 07 MAR 2006

L14 8 S L13
L15 8 DUP REM L14 (0 DUPLICATES REMOVED)

L15 ANSWER 1 OF 8 CABA COPYRIGHT 2006 CABI on STN
ACCESSION NUMBER: 2006:39808 CABA
DOCUMENT NUMBER: 20063003939
TITLE: Carcass traits, meat quality and muscle **enzyme** activity in strains of Merino wether hoggets
AUTHOR: Hopkins, D. L.; Hatcher, S.; Pethick, D. W.; Thornberry, K. J.
CORPORATE SOURCE: NSW Department of Primary Industries, Centre for Sheep Meat Development, PO Box 129, Cowra, NSW 2794, Australia. David.Hopkins@dpi.nsw.gov.au
SOURCE: Australian Journal of Experimental Agriculture, (2005) Vol. 45, No. 10, pp. 1225-1230. 28 ref.
Publisher: CSIRO Publishing. Collingwood
ISSN: 0816-1089
URL: www.publish.csiro.au/journals/ajea
DOI: 10.1071/EA04219
PUB. COUNTRY: Australia
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20060302
Last Updated on STN: 20060302

AB The **carcass** characteristics, meat quality and specific muscle **enzyme** activity were studied in 342 Merino wether hoggets representing 7 bloodlines comprising 2 superfine lines, 2 fine wool lines, 2 medium wool lines and 1 broad wool line over 2 years. All animals were supplemented at pasture for 5 weeks before **slaughter** with high energy **pellets**. Fat levels in the superfine bloodlines based on total tissue depth over the 12th rib, 110 mm from the midline were much greater than in other lines. This also applied to fat depth measured over the longissimus thoracis et lumborum (LL) muscle for one of the superfine bloodlines when adjusted to the same **carcass** weight. Differences in LL muscle dimensions were minor, although the broad wool bloodline had a lower depth which translated into a smaller cross-sectional area. Significant differences were detected between bloodlines for muscle pH with superfine animals having the highest values for the LL. The differences for the semitendinosus muscle were less consistent between bloodlines, but of the bloodlines the broad wool line had the lowest pH levels in both muscles. There were few differences between bloodlines for the meat colour parameters measured on the LL. In the second year, muscle samples were taken to determine the activity of fructose 1,6-bis-phosphatase, **lactate** dehydrogenase (LDH), isocitrate dehydrogenase (ICDH) and the concentration of myoglobin, indicators of anaerobic and aerobic metabolism. Samples from 50 **carcasses** were selected from a medium wool and a superfine bloodline (2x25) based on LL muscle pH values. Of the **enzymes**, only ICDH activity was different between the 2 bloodlines, with

muscle from the medium wool bloodline having a significantly higher activity than muscle from the superfine bloodline. This indicates a greater aerobic capacity in the muscle of the medium wool bloodline. The significantly lower muscle pH for medium wool bloodline was mirrored by a lower glycolytic capacity expressed as the LDH/ICDH ratio with a correlation of 0.46. Thus in this dataset, a high pH is related to a change in energy metabolism as reflected by the aerobic/anaerobic capacity of the muscle and this may be a reflection of a change in fibre type frequency, but this remains to be validated.

L15 ANSWER 2 OF 8 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-047618 [05] WPIDS
DOC. NO. CPI: C2005-016252
TITLE: Natural **protein waste** recycling apparatus for recycling **protein waste**, e.g. **poultry carcasses**, comprises pH adjustable enzymatic digest mixing assembly, mobile **grinding** assembly, and digesting and **emulsifying** assembly.
DERWENT CLASS: D13 D16
INVENTOR(S): DARLING, D S; DARLING, J S
PATENT ASSIGNEE(S): (DARL-I) DARLING D S; (DARL-I) DARLING J S
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2004265993	A1	20041230	(200505)*		17

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004265993	A1	US 2003-607691	20030630

PRIORITY APPLN. INFO: US 2003-607691 20030630
AN 2005-047618 [05] WPIDS
AB US2004265993 A UPAB: 20050124
NOVELTY - Natural **protein waste** recycling apparatus comprises pH adjustable enzymatic digest mixing assembly for mixing enzymatic digest medium and for adjusting its pH level, mobile **grinding** assembly, digesting and **emulsifying** assembly for digesting and **emulsifying** the protein soluble mixtures, and drying system. The mobile **grinding** assembly is mounted on the movable platform. The mobile **grinding** assembly comprises **grinder** and mixer.

DETAILED DESCRIPTION - **Protein waste** natural recycling apparatus comprises pH enzymatic digest mixing assembly for mixing enzymatic digest medium and for adjusting its pH level, mobile **grinding** assembly, digesting and **emulsifying** assembly for digesting and **emulsifying** the protein soluble mixtures, and drying system. The mobile **grinding** assembly is mounted on the movable platform (42). The mobile **grinding** assembly comprises **grinder** for **protein waste** and mixer for combining the ground **protein waste** and enzymatic digest medium to produce protein soluble mixture. The drying system comprises dough mixing apparatus,

extruder, and drying apparatus.
USE - For naturally recycling **protein wastes**, particularly **poultry carcasses**, e.g. feathers for use as nutritional supplement of animal.
ADVANTAGE - The invention is capable of degrading feathers without destroying their food value. It allows recycling of water, and minimizes growth of bacteria and other damaging microorganisms.
DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the mobile **grinding** assembly portion of the apparatus.
Movable platform 42
Grinder 66
Power source 75
Chopper pump 88
Inductor nozzle 90
(60, 62) Prep tank s
Dwg.1/8

L15 ANSWER 3 OF 8 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-057278 [06] WPIDS
DOC. NO. CPI: C2005-019664
TITLE: Recycling **protein waste** naturally involves preparing enzymatic digest medium that achieves and maintains pH, adding ground **protein waste** using **grinding** assembly, digesting and **emulsifying** using **heated** tank and separator and **drying**.
DERWENT CLASS: B04 D16
INVENTOR(S): DARLING, D S; DARLING, J S
PATENT ASSIGNEE(S): (DARL-I) DARLING D S; (DARL-I) DARLING J S
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2004265950	A1	20041230	(200506)*		16

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004265950	A1	US 2003-607690	20030630

PRIORITY APPLN. INFO: US 2003-607690 20030630
AN 2005-057278 [06] WPIDS
AB US2004265950 A UPAB: 20050126
NOVELTY - Recycling **protein waste** naturally involves preparing an enzymatic digest medium and adding acid that achieves and maintains pH between 4 - 6, adding to it ground **protein waste** to produce **protein** soluble mixture that is recirculated through chopper pump to ensure adequate mixing, **emulsifying** and mixing with carrier to produce dough like mixture that is **extruded** into **pellet**-like pieces and evenly drying out the **pellets**.
DETAILED DESCRIPTION - The ground **protein waste** is maintained at a temperature between 90 - 110 deg. F and periodically circulated to ensure complete enzymatic digestion. **Emulsification** of the protein soluble mixture allows the

mixture to separate into a water layer and **emulsified** fats and proteins and removing the water layer to be recycled while preparing the enzymatic digest medium. Preparing enzymatic waste medium comprises mixing at least one **enzyme**, an inedible **egg substance**, and at least one preservative. Adjusting the pH involves adding either **phosphoric** acid or **lactic** acid.

USE - For recycling **protein waste** naturally (claimed) to produce animal feed.

ADVANTAGE - The animal **protein waste** is processed in such a way that a portion of the system is mobile and can be taken from one animal production facility to another. It facilitates efficient and timely disposal of the waste in a non-toxic and odor free method. The system breaks down not only the softer protein sources but also feathers etc. in such a manner that does not denature or destroy the food value of the proteins.

Dwg.0/9

L15 ANSWER 4 OF 8 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-013917 [02] WPIDS
DOC. NO. CPI: C2005-004337
TITLE: Extracting oil, protein, carbohydrates, shell, and minor toxic components from seeds, e.g. cotton seed, involves dehulling seed, compressing flakes, and dephenolizing seed at low temperature.
DERWENT CLASS: D13 D23 J01
INVENTOR(S): GAOWEN, F; SAN, D H S; FAN, G W; SAN HO, D S
PATENT ASSIGNEE(S): (GAOS-N) GAO SHEN SDN BHD; (FANG-I) FAN G W; (HODS-I) SAN HO D S
COUNTRY COUNT: 2
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
AU 2003252766	A1	20040930	(200502)*		19
US 2005147722	A1	20050707	(200547)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
AU 2003252766	A1	AU 2003-252766	20031007
US 2005147722	A1	US 2004-799161	20040312

PRIORITY APPLN. INFO: MY 2003-847 20030312
AN 2005-013917 [02] WPIDS
AB AU2003252766 A UPAB: 20050107
NOVELTY - Extracting oil, protein, carbohydrates, shell, and minor toxic components from seeds involves dehulling oil seed, compressing kernel into flakes, agitating and mixing flakes with dephenolizers mixture, mixing filtrate with complexing compound, hydrolyzing, crystallizing, filtering and washing gossypol complex, treating dephenolized kernel flakes with propane and butane, dissolving pulp in alkali, and adding saturated limewater to **protein waste** solution.

DETAILED DESCRIPTION - Extraction of oil, protein, carbohydrates, shell, and minor toxic components from seeds involves dehulling of oil seed to separate out the shell and kernel, compressing kernel into

flakes at room temperature, agitating and mixing flakes with mixture of dephenolizers for a time at a temperature, mixing filtrate with complexing compound to form gossypol complex, hydrolyzing, crystallizing, filtering and washing gossypol complex to yield industrial gossypol, treating dephenolized kernel flakes with liquid propane and butane to yield oil for a time at a temperature, dissolving pulp derived from oil extraction in alkali to yield protein on precipitation, and adding saturated limewater to **protein waste** solution by precipitation, filtration of residual gossypol, electrolysis and condensation to yield carbohydrates. The mixture of dephenolizers comprises alcohol, acid, and **enzyme**.

USE - For extracting oil, protein, carbohydrates, shell, and other minor toxic components from seeds, e.g. cotton seed, rubber seed, sunflower seed, safflower seed, peanut flax seed, hemp seed, rape seed, or poppy seed (claimed).

ADVANTAGE - The novel method produces high quality oil and obtained hydrolyzed protein, thus comprehensively using oil seeds. It does not involve discharge of wastewater and off-scum, thus overcoming environmental pollution as caused in the conventional process.

DESCRIPTION OF DRAWING(S) - The figure shows a flow chart of the above method of extracting oil, protein, carbohydrates, shell, and minor toxic components from seeds.

Dwg.1/3

L15 ANSWER 5 OF 8 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-292971 [25] WPIDS
DOC. NO. CPI: C2000-088508
TITLE: Process for producing powdery acid-treated eggs for use as health food, comprising immersing a whole egg in an edible acid solution and **spray-drying**.
DERWENT CLASS: D13
INVENTOR(S): HAGIWARA, H; HAGIWARA, Y
PATENT ASSIGNEE(S): (HAGI-I) HAGIWARA Y
COUNTRY COUNT: 26
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000018257	A1	20000406	(200025)*	JA	20
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AU CA CN JP KR US					
AU 9956526	A	20000417	(200035)		
EP 1050220	A1	20001108	(200058)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
CN 1286595	A	20010307	(200140)		
KR 2001031749	A	20010416	(200163)		
JP 2000571782	X	20011218	(200206)		
US 6358554	B1	20020319	(200224)		
AU 768268	B	20031204	(200382)		
TW 575403	A	20040211	(200454)		
CN 1165245	C	20040908	(200615)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000018257	A1	WO 1999-JP5068	19990917

AU 9956526	A	AU 1999-56526	19990917
EP 1050220	A1	EP 1999-943381	19990917
		WO 1999-JP5068	19990917
CN 1286595	A	CN 1999-801659	19990917
KR 2001031749	A	KR 2000-704814	20000503
JP 2000571782	X	WO 1999-JP5068	19990917
		JP 2000-571782	19990917
US 6358554	B1	WO 1999-JP5068	19990917
		US 2000-554889	20000522
AU 768268	B	AU 1999-56526	19990917
TW 575403	A	TW 1999-116407	19990923
CN 1165245	C	CN 1999-801659	19990917

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9956526	A	Based on	WO 2000018257
EP 1050220	A1	Based on	WO 2000018257
JP 2000571782	X	Based on	WO 2000018257
US 6358554	B1	Based on	WO 2000018257
AU 768268	B	Previous Publ.	AU 9956526
		Based on	WO 2000018257

PRIORITY APPLN. INFO: JP 1999-113712 19990421; JP 1998-287353 19980925

AN 2000-292971 [25] WPIDS

AB WO 200018257 A UPAB: 20000524

NOVELTY - A process for producing a powdery egg comprises adding an aqueous solution of an edible acid to the whole **egg** (including the **egg shell**), immersing the **egg** in the solution at 0 50 deg. C, optionally filtering the acid-treated egg solution, and then **spray-drying**.

DETAILED DESCRIPTION - The amount of the aqueous solution of the edible acid is at least 150 ml per 100 g of egg. The **spray-drying** is carried out at a blowing temp of 180 deg. C or higher and at an exhaust temp of 120 deg. C or higher.

USE - The powdery acid-treated egg is used for preparing health foods.

ADVANTAGE - The powdery acid-treated egg obtained by the invented method has excellent digestivity and does not cause an allergic reaction.

Dwg.0/0

L15 ANSWER 6 OF 8 CABA COPYRIGHT 2006 CABI on STN

ACCESSION NUMBER: 1998:150616 CABA
DOCUMENT NUMBER: 19980806475
TITLE: Ascaris suum: protein phosphotyrosine phosphatases in oocytes and developing stages
AUTHOR: Wimmer, M.; Schmid, B.; Tag, C.; Hofer, H. W.
CORPORATE SOURCE: Faculty of Medicine, Institute of Anatomy, University of Giessen, D-35392 Giessen, Germany.
SOURCE: Experimental Parasitology, (1998) Vol. 88, No. 2, pp. 139-145. 20 ref.
ISSN: 0014-4894
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19981014
Last Updated on STN: 19981014

AB Protein tyrosine phosphatase activities were detected in high-MW form and as a 50 to 55 kDa protein in the soluble fraction of Ascaris suum oocytes. The same or a similar tyrosine phosphatase activity was also found in detergent extracts from the **pelletal** fraction. Another tyrosine phosphatase of MW 180 kDa that dephosphorylated myelin basic protein was also found in extracts from the soluble fraction, as well as in detergent extracts from the **pelletal** fraction. The activities of the myelin basic protein-dephosphorylating protein phosphatase remained fairly constant during early development of the oocytes, but the activity of the **enzyme** dephosphorylating modified lysozyme in the **pelletal** fraction decreased to less than 10% of the initial activity between days 3 and 28 of incubation. Protein tyrosine kinase and protein tyrosine phosphatase were associated with the **egg shell**, and were detected near mitochondria. In the larval stage protein tyrosine kinase had increased in the chitin layer of the shell and in the nuclei, and the relative amount of tyrosine phosphatase decreased.

L15 ANSWER 7 OF 8 JAPIO (C) 2006 JPO on STN
ACCESSION NUMBER: 1981-001880 JAPIO
TITLE: PREPARATION OF SUGAR LIQUID USEFUL AS RAW MATERIAL OF BEER, ETC. AND PROTEIN USEFUL AS FOOD FROM RICE AND MILO
INVENTOR: SHIGEHIRO GENICHI
PATENT ASSIGNEE(S): SHIGE HIROSHI
BOUSEI KIGYO KK
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 56001880	A	19810110	Showa	C12C007-04

APPLICATION INFORMATION
STN FORMAT: JP 1979-78547 19790620
ORIGINAL: JP54078547 Showa
PRIORITY APPLN. INFO.: JP 1979-78547 19790620
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1981
AN 1981-001880 JAPIO
AB PURPOSE: To effect the saving of resources and the prevention of environmental pollution, by preparing sugar liquid using rice or milo as a raw material, recovering protein, and by reusing and utilizing its waste water.
CONSTITUTION: Rice or milo as a raw material is polished 1, soaked 2 in a solution and swollen. After swell, the material is pulverized 3 to give starch **emulsion**, which is separated by the liquid cyclone 4, the thickener 5, etc. into coarsely divided particles, starch **emulsion**, and an embryo bud. The coarsely divided particles are further pulverized 6, and the separation operation is repeated so that these particles are completely converted into the starch **emulsion**. A liquid **enzyme** is added to the starch **emulsion**, which is liquefied by heat, and separated by the decanter 22 into liquid and solid materials. The liquid is recovered as sugar liquid. The solid materials are dewatered 26, dried, and recovered as **protein**. While the **waste** water from the soaking tank 2 is returned to the pulverizing process 3 and utilized. The residue of the waste water and the waste water from the pulverizing process 3 and 9, etc. are subjected to **lactic** acid fermentation, and blended with the sugar in polishing to give a

feeding stuff.
COPYRIGHT: (C)1981,JPO&Japio

L15 ANSWER 8 OF 8 CABA COPYRIGHT 2006 CABI on STN
ACCESSION NUMBER: 76:75830 CABA
DOCUMENT NUMBER: 19751438323
TITLE: Effects of feed on the performance, carcass quality and muscle and serum **enzyme** activities of heavy swine
AUTHOR: Minoccheri, F.; Mordenti, A.
SOURCE: Mondo del Latte, (1975) Vol. 29, No. 3, pp. 150-155.
ISSN: 0368-9123
Secondary Source: Food Science and Technology Abstracts (1975) 7, 10S1414
DOCUMENT TYPE: Journal
LANGUAGE: Italian
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

AB A total of 120 Large White pigs (equal numbers of females and castrated males) was used in studies on the effects of feed on performance, **carcass** quality and **enzyme** activities in muscle and serum. Five diets were tested, based on (i) **pelleted** maize and maize cob meal, (ii) **pelleted** maize and hay, (iii) maize and maize cob mash, (iv) maize and hay mash and (v) whole maize ear mash. The experimental diets were given from about 50 kg liveweight to **slaughter** weight (150 kg). Tables of results are given. Pigs given (i) had the highest proportions of lean, ham and shoulder, and least fat; pigs given (v) had the poorest values for all these attributes. Pigs given (iv) had the highest and those given (i) had the lowest **lactate** dehydrogenase and aldolase activities in muscle tissue. **Carcasses** of castrated males had thicker back fat, less lean meat, more fat and less loin than those of females.

(FILE 'CAPLUS' ENTERED AT 16:04:53 ON 07 MAR 2006)
L1 8 SEA FILE=REGISTRY ABB=ON PLU=ON (KERATINASE/CN OR "KERATINASE (BACILLUS LICHENIFORMIS GENE KERB)"/CN OR "KERATINASE (BACILLUS LICHENIFORMIS STRAIN ATCC 53737 GENE KERA)"/CN OR "KERATINASE (MICROSPORUM CANIS GENE MEP3 PRECURSOR)"/CN OR "KERATINASE (MICROSPORUM CANIS GENE MEP3)"/CN OR "KERATINASE (NOCARDIOPSIS STRAIN TOA-1 GENE NAPA PRECURSOR)"/CN OR "KERATINASE (NOCARDIOPSIS STRAIN TOA-1)"/CN OR "KERATINASE (TRICHOPHYTON)"/CN)
L2 1639 SEA FILE=REGISTRY ABB=ON PLU=ON PROTEASE ?/CN
L3 4960 SEA FILE=REGISTRY ABB=ON PLU=ON PROTEINASE ?/CN
L4 6407 SEA FILE=REGISTRY ABB=ON PLU=ON L1 OR L2 OR L3
L5 1 SEA FILE=REGISTRY ABB=ON PLU=ON "PHOSPHORIC ACID"/CN
L6 1 SEA FILE=REGISTRY ABB=ON PLU=ON "LACTIC ACID"/CN
L7 2 SEA FILE=REGISTRY ABB=ON PLU=ON L5 OR L6
L8 1197102 SEA FILE=CAPLUS ABB=ON PLU=ON L4 OR ENZYM## OR KERATINASE OR KERATINOLYTIC OR PROTEASE OR PROTEINASE
L9 37044 SEA FILE=CAPLUS ABB=ON PLU=ON L8 AND (L7 OR LACTIC OR LACTATE OR PHOSPHORIC OR ((DIHYDROGEN OR (H OR HYDROGEN))(W)PHOSPHATE)(5A)(MONOSODIUM OR SODIUM OR NA))
L10 27 SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND ((SLAUGHTERHOUSE OR SLAUGHTER OR ABATTOIR OR POULTRY OR TURKEY OR CHICKEN OR (GALLUS OR G)(W)(GALLUS OR DOMESTIC?) OR FOWL OR MELEAGRIDINAE OR DUCK)(S)(WASTE OR CARCASS?) OR EGGSHELL OR EGG(3A)(S

UBSTANCE OR SHELL))
L11 18 SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND ((PROTEIN OR SOYABEAN OR SOYBEAN OR (SOYA OR SOY)(W)BEAN OR PEANUT)(5A)WASTE)
L12 41 SEA FILE=CAPLUS ABB=ON PLU=ON L10 OR L11
L13 4 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND (EXTRUD? OR EXTRUS? OR EMULS? OR PELLET? OR (HEAT? OR SPRAY?)(5A)(DRIED OR DRY?) OR GRIND?)
L16 27574 SEA FILE=CAPLUS ABB=ON PLU=ON L8(L)(L7 OR LACTIC OR LACTATE OR PHOSPHORIC OR ((DIHYDROGEN OR (H OR HYDROGEN))(W)PHOSPHATE)(5A)(MONOSODIUM OR SODIUM OR NA))
L17 13 SEA FILE=CAPLUS ABB=ON PLU=ON L16(L)((SLAUGHTERHOUSE OR SLAUGHTER OR ABATTOIR OR POULTRY OR TURKEY OR CHICKEN OR (GALLUS OR G)(W)(GALLUS OR DOMESTIC?) OR FOWL OR MELEAGRIDINAE OR DUCK)(S)(WASTE OR CARCASS?) OR EGGSHELL OR EGG(3A)(SUBSTANCE OR SHELL))
L18 6 SEA FILE=CAPLUS ABB=ON PLU=ON L16(L)((PROTEIN OR SOYABEAN OR SOYBEAN OR (SOYA OR SOY)(W)BEAN OR PEANUT)(5A)WASTE)
L19 17 SEA FILE=CAPLUS ABB=ON PLU=ON (L17 OR L18) NOT L13

L20 13 S L19 NOT (PY=>2003 OR 20030630)

L20 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 22 Aug 2001
ACCESSION NUMBER: 2001:608647 CAPLUS
DOCUMENT NUMBER: 136:199252
TITLE: The effect of ethoxyquin on the quality of ground poultry mortality carcasses preserved by lactic acid fermentation and phosphoric acid stabilization
AUTHOR(S): Middleton, T. F.; Ferket, P. R.; Boyd, L. C.
CORPORATE SOURCE: Department of Poultry Science, North Carolina State University, Raleigh, NC, 27695-7608, USA
SOURCE: Poultry Science (2001), 80(8), 1154-1163
CODEN: POSCAL; ISSN: 0032-5791
PUBLISHER: Poultry Science Association, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fermentation and acidification have been shown to preserve the protein quality of ground poultry coproducts, but the effects of these processes on their lipid stability are unknown, especially in the presence of an antioxidant. To evaluate the effects of these treatments on lipid quality, ground **poultry** mortality **carcasses**, with and without an addition of 500 ppm ethoxyquin, were stabilized for 14 and 45 days by **lactic** acid fermentation or acidification with 2.76, 5.07, 7.35, or 9.65% feed-grade H3PO4. Ethoxyquin treatment significantly improved the oxidative stability of lipids from all storage treatments. However, the addition of ethoxyquin increased the levels of volatile N (VN) from 2.51 to 3.18% in products stored for 45 days and resulted in an increase in free fatty acids in all ensiled products. Ethoxyquin addition had no effect on the fatty acid profile of products stored for 14 days but significantly increased the levels of stearic (C18:0) and arachidonic acids (C20:4) in products stored for 45 days. In this experiment, the addition of ethoxyquin to preservation systems for the short-term storage of **poultry** mortality **carcasses** improved the lipid quality of the ground material without compromising the protein quality or affecting proximate anal.

parameters. However, the increased oxidative stability of mortality silage materials that contain ethoxyquin may contribute to enhanced microbial or **enzymic** activities that result in proteolytic or lipolytic breakdown products following longer periods of storage.
REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 19 Jan 2001
ACCESSION NUMBER: 2001:48107 CAPLUS
DOCUMENT NUMBER: 134:236285
TITLE: Critical factors in chitin production by fermentation of shrimp biowaste
AUTHOR(S): Rao, M. S.; Munoz, J.; Stevens, W. F.
CORPORATE SOURCE: Bioprocess Technology Program, Asian Institute of Technology, Klong Luang Pathumthani, 12120, Thailand
SOURCE: Applied Microbiology and Biotechnology (2000), 54(6), 808-813
CODEN: AMBIDG; ISSN: 0175-7598
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Factors affecting Lactobacillus fermentation of shrimp **waste** for chitin and **protein** liquor production were determined The objective of the fermentation is medium conditioning by Lactobacillus through production of **proteases** and lowering of the pH. The efficiency was tested by conducting fermentation of biowaste in 1-l beakers with or without pH adjustment using different acids. Addition of 5% glucose to the biowaste supported the growth of **lactic** acid bacteria and led to better fermentation Among four acids tested to control pH at the start and during fermentation, acetic acid and citric acid proved to be the most effective. In biowaste fermented with 6.7% L. plantarum inoculum, 5% glucose, and pH 6.0 adjusted with acetic acid, 75% deproteination and 86% demineralization was achieved. Replacement of acetic acid by citric acid gave 88% deproteination and 90% demineralization. The fermentation carried out in the presence of acetic acid resulted in a protein fraction that smelled good and a clean chitin fraction.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 03 Sep 2000
ACCESSION NUMBER: 2000:610305 CAPLUS
DOCUMENT NUMBER: 133:295777
TITLE: Supplementary α-tocopherol acetate in full-fat rapeseed-based diets for pigs: effect on performance, plasma enzymes and meat drip loss
AUTHOR(S): Onibi, Gbenga E.; Scaife, Jeremy R.; Murray, Ian; Fowler, Vernon R.
CORPORATE SOURCE: Department of Agriculture, University of Aberdeen, Aberdeen, AB24 5UA, UK
SOURCE: Journal of the Science of Food and Agriculture (2000), 80(11), 1617-1624
CODEN: JSFAAE; ISSN: 0022-5142

PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE:. Journal
LANGUAGE: English
AB Twenty-four Large White + Landrace pigs were individually fed, from 50 to 90 kg live weight, either a control diet containing palm oil or one of three diets based on full-fat rapeseed (250 g/kg) (diets RD). The RD diets were supplemented with 0, 200 or 500 mg dl-α-tocopherol acetate (ATA)/kg diet (diets RD0, RD200 and RD500 resp.). Diets were formulated to be isonitrogenous and isocaloric. Daily live weight gain was significantly increased ($p<0.01$) in pigs fed diet RD500. Plasma AT concentration was significantly increased by dietary supplementation with 200 mg ATA/kg but showed no further significant increase by supplementation with 500 mg ATA/kg. At **slaughter**, after 45 days, **carcass** wts. were increased for the RD500 group but dressing percentage was unaffected. ATA supplementation significantly reduced drip loss on days 4 and 5-7 in fresh muscle and on days 1 and 4 in frozen muscle. The concns. of calcium, sodium and potassium in drip loss fluid collected on days 1 and 4 from fresh muscle were not significantly affected by treatment or by time of collection and did not suggest any change in the relative contribution of intra- and extracellular fluid to total drip loss. Plasma **enzyme** activities related to tissue damage (creatine kinase, alanine aminotransferase, aspartate aminotransferase and **lactate** dehydrogenase) were not influenced by dietary treatments.
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 13 Jan 2000
ACCESSION NUMBER: 2000:30909 CAPLUS
DOCUMENT NUMBER: 133:29109
TITLE: Growth performance, meat quality and activities of glycolytic enzymes in the blood and muscle tissue of calves infected with Sarcocystis cruzi
AUTHOR(S): Daugschies, A.; Hintz, J.; Henning, M.; Rommel, M.
CORPORATE SOURCE: Tierarztliche Hochschule Hannover, Institut fur Parasitologie, Hannover, D-30559, Germany
SOURCE: Veterinary Parasitology (2000), 88(1,2), 7-16
CODEN: VPARDI; ISSN: 0304-4017
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Growth performance and the pattern of glycolytic **enzymes** in the blood plasma were assessed during exptl. Sarcocystis cruzi infection (1 + 105 sporocysts per calf) in six calves; five calves served as noninfected controls. At **slaughter** (68 or 88 days post infection), **carcass** weight, dressing percentages and several parameters of meat quality (pH, color brightness, rigor, water absorbing capacity, water binding capacity) were recorded. Moreover, **enzyme** activities were measured in muscle homogenates. Weight gain was significantly impaired by the infection. Activities of **lactate** dehydrogenase (LDH) and aldolase (ALD) significantly increased in the blood plasma of the infected calves during the chronic stage of the disease, while glucose-6-phosphate dehydrogenase (G6PDH) and isocitrate dehydrogenase (ICDH) were not significantly altered. This was accompanied by a significant decrease of **enzyme** activities in the Musculus longissimus dorsi (LDH,

ALD), in the diaphragmatic musculature (ALD, G6PDH) and in the heart (LDH, ALD). Activities of LDH, ALD, ICDH and G6PDH were visualized by **enzyme** histochem. within the developing sarcosporidial cysts. However, isoenzymes of parasite origin could not be demonstrated by agar-gel electrophoresis of muscle homogenates or blood plasma. It is concluded that sarcocystiosis of even moderate severity alters the performance of calves but not meat quality. Leakage of glycolytic **enzymes** from the affected muscles is the probable cause of increased plasma **enzyme** activities. Although these **enzymes** are also synthesized by the parasite, the contribution of parasite-derived **enzymes** to the observed changes of **enzyme** patterns remains in question.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 18 Aug 1997
ACCESSION NUMBER: 1997:527624 CAPLUS
DOCUMENT NUMBER: 127:204743
TITLE: Alkaline solubilization of chicken feather and wool under room-temperature and normal atmospheric pressure conditions and the amino acid composition of the products
AUTHOR(S): Maeda, Hidekatsu; Numata, Yukiyo; Toyoda, Atsushi
CORPORATE SOURCE: Faculty of Engineering, Soka University, Hachoji, 192, Japan
SOURCE: Animal Science and Technology (1997), 68(6), 587-595
CODEN: ALSTEQ; ISSN: 0918-2365
PUBLISHER: Japanese Society of Zootechnical Science
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB Feather and **waste** wool are composed of keratin **protein**; therefore they are valuable protein resources. However, there is no simple and large scale solubilization procedure for production of animal feed and organic fertilizer from feather and waste wool. As a result of our investigation, feather and wool were found to be solubilized by alkaline solution under room temperature and normal atmospheric pressure conditions. Ninety two and 96% of feather and wool were, resp., solubilized by 5% sodium hydroxide treatment at 30°C for 20 h. Both the feather- and the wool solution contained about 1% L-serine and about 0.5% glycine as free amino acids and very small amount of unknown amino acid derivs. Amts. of the unknown derivs. were increased 5 to 10 times by the treatment for 68h. The materials in the solubles were fractionated to a precipitate fraction and a supernatant fraction at 90% ethanol concentration In the case of feathers, the same amts. were equally divided into both fractions. In the case of wool, 77% and 23% of the solids were divided into the precipitate fraction and the supernatant fraction, resp. From these results, feather and wool were found to be largely degraded to low mol. weight materials. Aside from the generally well-known amino acids such as L-glutamic acid, L-cysteic acid, lanthionine and 2 kinds of unidentified amino acid derivs. were also found in the hydrolyzates of both the solubles completely hydrolyzed by hydrochloric acid. No other materials except for amino acids were recognized by thin layer chromatog. using 4 kinds of solvents. Large amts. of hydrophobic amino acids such as L-valine and L-leucine were found in the hydrolyzate after the addnl.

enzyme treatment. The feather-soluble and the wool-soluble neutralized by **phosphoric** acid after alkaline solubilization could be applicable as a fertilizer.

L20 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 23 Nov 1996
ACCESSION NUMBER: 1996:689650 CAPLUS
DOCUMENT NUMBER: 126:6503
TITLE: Development of a microbiological peptone from a gelatin-processing side stream
AUTHOR(S): Leclercq, A. O. M.; Bruggeman, G.; Vandamme, E. J.
CORPORATE SOURCE: Department of Biochemical and Microbial Technology, University of Gent, Ghent, Belg.
SOURCE: Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (1996), 61(4a), 1427-1430
CODEN: MFLBER
PUBLISHER: Universiteit Gent, Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new trend in the development of microbiol. peptones is the upgrading of **protein**-rich **waste** streams. In this context, a side stream of the gelatin-processing from animal hides and bones, called marcs F4404, was tested as to its value as a peptone and protein hydrolyzate suitable for microbial nutrition. As an initial step, marcs F4404 was defatted using acetone. Protein hydrolyzates were then prepared from the defatted marcs F4404 by controlled **enzymic** treatment at 60°C, using a.o. crude papain. An optimized controlled **enzymic** hydrolysis process resulted in a protein hydrolyzate containing 78.94% of protein. The chemical composition and the peptic mol. weight distribution of the hydrolyzate was also studied. The protein hydrolyzate, resulting from papain hydrolysis, was used as a cheap peptone or N-source for nutritional studies with several fermentation microorganisms. A wide range of G- bacteria, G+ bacteria (mainly **lactic** acid bacteria), yeasts and molds grew efficiently in media supplemented with the here developed peptone as sole N-source.

L20 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 05 Mar 1994
ACCESSION NUMBER: 1994:105527 CAPLUS
DOCUMENT NUMBER: 120:105527
TITLE: Calcium-enriched fermented protein compositions for food or pharmaceuticals
INVENTOR(S): Matsuno, Yasuhiko; Nakajima, Hiromasa; Izumi, Kenjiro; Okamoto, Juki
PATENT ASSIGNEE(S): Ogawa Koryo Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05268907	A2	19931019	JP 1992-68242	19920326

PRIORITY APPLN. INFO.: JP 1992-68242 19920326

AB Ca materials-containing protein solns. are converted to pH≥5.0 by **lactic** acid fermentation and treated with **protease** during or after the fermentation to manufacture the title compns. Soybean milk containing glucose and **egg shell** was incubated with Streptococcus lactis at 30° for 24 h and treated with Denapsin at 50° for 3.5 h to give a Ca-enriched fermented soybean milk powder containing 17.64 mg/g Ca. The powder had good flavor and texture.

L20 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 01 May 1993
ACCESSION NUMBER: 1993:165507 CAPLUS
DOCUMENT NUMBER: 118:165507
TITLE: Inhibition of osteoclastic bone resorption by calcitonin in the cultured medullary bone of laying hens
AUTHOR(S): Sugiyama, Toshie; Ohashi, Tomoo; Kusuhara, Seiji
CORPORATE SOURCE: Grad. Sch. Sci. Technol., Niigata Univ., Niigata, 950-21, Japan
SOURCE: Nippon Kakin Gakkaishi (1993), 30(1), 16-23
CODEN: NKKGAB; ISSN: 0029-0254
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **enzyme** activity and ultrastructure of osteoclasts in medullary bone culture in the presence of calcitonin were examined using laying hens during the bone resorptive phase when the **egg** is in the **shell** gland of the oviduct. Before and after culturing in the absence of calcitonin, osteoclasts on the surface of medullary bone matrix showed strong acid phosphatase (ACP) and succinate dehydrogenase (SDH) activity and moderate **lactate** dehydrogenase (LDH) activity. These cells had a well-developed ruffled border adjacent to the bone matrix. In the presence of calcitonin, ACP, SDH, and LDH activity of osteoclasts decreased after 12 h of culturing. The ruffled border disappeared within 1 h. The clear zone developed near the bone matrix after 12 h. These results suggest that calcitonin directly inhibits osteoclastic bone resorption in the medullary bone of laying hens during the bone resorptive phase.

L20 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 03 Oct 1986
ACCESSION NUMBER: 1986:513970 CAPLUS
DOCUMENT NUMBER: 105:113970
TITLE: Animal food from protein-containing waste materials
INVENTOR(S): Kallai, Miklos; Piukovich, Sandor; Stankovics, Lajos; Szakacs, Gyorgy; Udvardy, Agnes
PATENT ASSIGNEE(S): BOSCOOP Agraripari Kozos Vallalat, Hung.
SOURCE: Brit. UK Pat. Appl., 16 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2167639	A1	19860604	GB 1984-30317	19841130

CA 1227081	A1	19870922	CA 1984-469232	19841204
FR 2574630	A1	19860620	FR 1984-19347	19841218
PRIORITY APPLN. INFO.:			GB 1984-30317	19841130

AB Animal **protein**-containing industrial or agricultural **wastes** are obtained in chopped aqueous form, treated with proteolytic **enzymes**, gelatinized starch is added, then amylolytic **enzymes** and a **lactate** fermn culture are added, with anaerobic fermentation at 20-65° to produce simple sugars and **lactic** acid and thus a preservable product usable as an animal feed component. Thus, 15 tons of livestock byproducts and **slaughterhouse**, leather, food and fish processing **wastes** were chopped finely and ground (particle size 2-5 mm diameter), pumped to an **enzyme** liquefier, Alcalase 06-L added (at 2%), heated (56°) for 20 min, heat-sterilized, placed in a fermentor, and corn grits (2 tons 40% aqueous suspension) gelatinized with 3 kg α-amylase added to the fermentor. The whole was fermented with 200 L Lactobacillus plantarum inoculum (with added trace elements) for 24 h at 37° anaerobically and then fermented with amyloglucosidase (4 L; 70 units/mL) in a postfermentor for 72 h to produce a product to be fed as is or added to forage for pigs. The product was of pH 4 and contained 17.4% protein and 17.6% crude fat.

L20 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 22 Apr 2001
ACCESSION NUMBER: 1966:501773 CAPLUS
DOCUMENT NUMBER: 65:101773
ORIGINAL REFERENCE NO.: 65:19046d-f
TITLE: Metabolism in the walls of chicken oviducts
AUTHOR(S): Baumane, V.
SOURCE: Trudy Laboratorii Biokhimii i Fiziologii Zhivotnykh Instituta Biologii, Akademiya Nauk Latviiskoi SSR (1965), 4, 81-94
From: Ref. Zh., Biol. Khim. 1966, Abstr. No. 13F1022.
CODEN: TBFZAC; ISSN: 0371-5477
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Biochem. processes in oviduct walls associated with formation of the **eggshell** were studied in Plymouth Rock chickens. During the period of **eggshell** formation, the citric acid (I) concentration in the ovidust isthmus was sharply elevated (to 100-fold greater levels than were in the liver and 20-fold greater than in the protein part of the oviduct). The I content in the blood was low during this period. A direct relation was found between the I content and Ca concentration in the oviduct isthmus during the shell-formation period. This elevated I content in the oviduct isthmus was associated with a decrease in I oxidation in this section. The **lactic** acid content in the oviduct isthmus was also higher than in other sections of the oviduct, while in nonlaying hens, the **lactic** acid content was the same in all sections of the oviduct. Respiration and **enzyme** activity were studied. Anaerobic processes predominated in the oviduct isthmus during the **eggshell**-formation period. A vitamin D deficit in the food had no effect on biochem. processes in the oviduct. Thus, calcification of **eggshells** in layer hens is associated with active synthesis of I in the oviduct; I formed in the uterus may act as a Ca acceptor, and exists in the oviduct as a complex with Ca.

L20 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 22 Apr 2001
ACCESSION NUMBER: 1951:45160 CAPLUS
DOCUMENT NUMBER: 45:45160
ORIGINAL REFERENCE NO.: 45:7706i,7707a-e
TITLE: Intermediary metabolism of unfertilized oyster eggs
AUTHOR(S): Cleland, K. W.
CORPORATE SOURCE: Univ. Sydney, Australia
SOURCE: Proc. Linnean Soc. N.S. Wales (1950), 75, 296-319
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. preceding abstract The **eggs** contained glycogen, reducing **substance, lactic** acid, pyruvic acid, free amino acids, free tyrosine, and inorg. P in amts. equal to 3.1-6.2, 1.0-2.3, 0.02-0.05, 0-0.01, 7-11, 1-1.5, and 0.25-0.53 mg./ml. eggs. Also present were phospholipide, neutral fat, fructose phosphates, phosphoglyceric acid, cozymase, adenylic acid, and adenosine triphosphate (ATP). The effects of CN- and N3- inhibition indicated that 90-95% of the respiration was mediated by a cytochrome-cytochrome oxidase system. PhMgNO3 caused an 80% inhibition of respiration. The eggs were impermeable to natural substrates. The results of inhibition of the eggs by NaF indicated that glycolysis produced approx. 15 microliters CO2/hr./0.3 ml. eggs. This was considerably less than indicated by direct measurement of acid production. The higher value was probably due to nonmetabolic production of acid. Anaerobiosis or poisoning with CN- or dinitrophenol depleted the eggs of high-energy phosphate. The respiration of homogenates of the eggs was stimulated by glycogen, fructose, glucose plus ATP, butyrate, caproate, lecithin, glycerol, glycerophosphate, citrate, α-ketoglutarate, succinate, fumarate, malate, pyruvate, **lactate**, DL-aspartate, and L-glutamate, but not by ATP alone, galactose, arabinose, xylose, acetate, propionate, acetoacetate, glycine, DL-alanine, L-leucine, or L-tyrosine. Higher fat acids inhibited respiration, even after ATP was added. Addition of tricarboxylic acid cycle intermediates did not affect the nonoxidation of higher fat acids. Cozymase increased the stimulation of respiration by L-glutamate. Egg homogenates contained typical cytochrome oxidase, malic oxidase, and succinic oxidase systems. The last was only slightly inhibited by malonate. Lipase, **proteinase**, adenosine triphosphatase, and a very active amylase were present. Maximum activity was obtained from the glycolytic system after addition of cozymase and adenylic acid or ATP. Pyruvic acid was the main end product, and accumulated to a greater extent after the granules were centrifuged from the homogenate by 20,000 times gravity for 30 min. A tricarboxylic acid cycle appeared to be present for complete oxidation of pyruvate. High-energy phosphate was formed during the respiration of homogenates.

L20 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 22 Apr 2001
ACCESSION NUMBER: 1947:31553 CAPLUS
DOCUMENT NUMBER: 41:31553
ORIGINAL REFERENCE NO.: 41:6351c-f
TITLE: What's new in farm science. Annual report of the director
AUTHOR(S): Baldwin, Ira L.; Clark, Noble; Hoveland, Niemen
CORPORATE SOURCE: Madison, WI

SOURCE: Wisconsin, Agricultural Experiment Station, Bulletin (1947), 471(Pt. 1), 70 pp. CODEN: WUABAD; ISSN: 0096-8552
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Brief progress reports are presented on the following projects: feeding less grain to cows, soil conservation, use of penicillin against Bang's disease and udder bacteria, vitamin content of colostrum milk, feeding iodized casein to cows, "Grey Scours" necro of pigs, effect of low-grade swine rations, synthesis of niacin in incubating **turkey** eggs, controlling darkening of cooked potatoes, riboflavin content of cooked eggs, food value of Mendota soybeans, amino acid content of meats, a new antianemia vitamin in liver and milk, effect of milk on dental decay, a butterfat fraction as a superior growth stimulator, new animal tube cages for nutritional studies, intereffect of high corn rations and tryptophan or niacin, protective action of whole wheat against canine hysteria, K deficiency in dogs, vitamin B10 and B11 activity of synthetic folic acid, a substitute for vitamin B6, nutritional requirements of Trichomonas foetus, protein of hoofs and feathers as an animal feed, vitamins in fur farming, dietary needs of fish, manufacture of **lactic** acid from paper-mill **wastes**, effect of potato storage on chip quality, N-transferring **enzyme** in crops, variation in availability of amino acids to plants, and the role of hemoprotein in plants.

L20 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 16 Dec 2001
ACCESSION NUMBER: 1944:40099 CAPLUS
DOCUMENT NUMBER: 38:40099
ORIGINAL REFERENCE NO.: 38:5995c-e
TITLE: Certain products used in the butcher's shop
AUTHOR(S): Martel, H.
SOURCE: Bull. acad. med. (1943), 107, 317-25
From: Chem. Zentr. II, 1422(1943).
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB In the preparation of sausage the addition of sugar in amts. of 20 g./l. or 15.0% of the salt mixture is unobjectionable; the addition of phosphates to the sugar mixture is not recommended. The use of **enzymes** for **lactic** acid fermentation is undesirable. Milk is a satisfactory binding agent. Prevailing specifications on the use of starch-containing admixts. should not be modified. Skim milk, casein and dried-whey protein are useful substitutes for milk as binding agents. When eggs are used as a binding agent they should be used either as fresh or cold-storage **eggs** (in the **shell**) or as the frozen or dried product. When blood plasma is used as a binding agent it must be free from decomposition and must not be chemically treated. When sugar is also used, the nitrate content of the salt mixture must not exceed 5%. The use of alkali carbonates in the preparation of meat is forbidden. The same is true of artificial coloring.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB' ENTERED AT 16:08:15 ON 07 MAR 2006)
L21 20 S L18
L22 53 S L17
L23 72 S L21 OR L22
L24 66 S L23 NOT L14

Searcher : Shears 571-272-2528

L25 42 DUP REM L24 (24 DUPLICATES REMOVED)

L28 2 S L25 AND PRESERV?
L29 2 S L25 AND (MIDS OR MEAL)
L30 0 S L25 AND PELLET?
L31 4 S L28 OR L29

L31 ANSWER 1 OF 4 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1986-145977 [23] WPIDS
DOC. NO. CPI: C1986-062395
TITLE: Animal food from **protein**-containing **waste** - with fermentation with amylolytic **enzymes** and **lactic** acid producing culture.
DERWENT CLASS: C03 D13 D16
INVENTOR(S): KALLAI, M; PIUKOVICH, S; STANKOVICS, L; SZAKACS, G; UDVARDY, A
PATENT ASSIGNEE(S): (BOSC-N) BOSCOOP AGAROPARIKO
COUNTRY COUNT: 6
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2167639	A	19860604	(198623)*		16
NL 8403620	A	19860616	(198629)		
FR 2574630	A	19860620	(198631)		
NO 8404763	A	19860623	(198632)		
DK 8405560	A	19860523	(198634)		
CA 1227081	A	19870922	(198742)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2167639	A	GB 1984-30317	19841130
NL 8403620	A	NL 1984-3620	19841128
FR 2574630	A	FR 1984-19347	19841218

PRIORITY APPLN. INFO: GB 1984-30317 19841130
AN 1986-145977 [23] WPIDS
AB GB 2167639 A UPAB: 19930922
A process for the treatment of industrial or agricultural **waste** matter including animal **protein** comprises (a) obtaining the **waste** matter in the form of an aqs. mass, (b) chopping up the aqs. mass, (c) treating the chopped mass with proteolytic **enzymes** of microbial origin so as to form a fluent suspension, (d) obtaining a gelatinised starch content in the suspension and (e) adding to this suspension amylolytic **enzymes** of microbial origin and a **lactic** acid producing culture and fermenting anaerobically at 20-65 deg.C to produce simple sugars and **lactic** acid whereby a **preserved** prod. is obtd. Pref. the aqs. mass in step (a) contains 15-45% dry matter. The suspension after step (c) is pref. sterilised at 130-180 deg.C for 5-60 mins. In step (e) a process accelerator may be added e.g. Mn(+2), Co(+2), Fe(+2), Zn(+2) or Cu(+2) at 0.08-0.8 ppm. The **lactic** acid bacteria is e.g. of the species Lactobacillus acidophilus, Streptococcus lactis, Pediococcus

acidilactici, Lactobacillus plantarum or Streptococcus thermophilus.
USE/ADVANTAGE - Food prods. may be obtd. from by-prods. from slaughter houses, the leather processing and food industries and from perished farm animals. The prod. can be stored for a long period without spoiling and compared to known processes the prod. can be prepared with better economy. The proteins are used by young animals (piglet, calf, lamb) better because they are pre-splitted by the **protease enzyme**. Due to its compsn. the **preserved** meat-mash hinders the development of gastroenteritis.
0/3

L31 ANSWER 2 OF 4 JAPIO (C) 2006 JPO on STN
ACCESSION NUMBER: 1999-164697 JAPIO
TITLE: PRODUCTION OF TREHALOSE AND SUGAR COMPOSITION CONTAINING TREHALOSE
INVENTOR: KUBOTA SATOO; OGUCHI MASAHISA; IWAI YOSHIO; KOBAYASHI HIROYUKI
PATENT ASSIGNEE(S): FUJI SEITO CO LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 11164697	A	19990622	Heisei	C12P019-12

APPLICATION INFORMATION
STN FORMAT: JP 1998-248428 19980902
ORIGINAL: JP10248428 Heisei
PRIORITY APPLN. INFO.: JP 1997-245747 19970910
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1999

AN 1999-164697 JAPIO
AB PROBLEM TO BE SOLVED: To produce trehalose useful as a **preservative** for pharmaceuticals, physiologically active substances, foods, etc., a water-retaining agent for cosmetics, etc., in a high efficiency by treating sucrose e.g. with a microorganism capable of producing an **enzyme** for converting sucrose into trehalose.
SOLUTION: The trehalose useful as a **preservative** for useful substances such as pharmaceuticals, diagnostics, hormones, fertilized **eggs**, sperms, physiologically active **substances**, **enzymes** and microorganisms and for foods, etc., a water-retaining agent for cosmetics, etc., is produced in large quantities at a low cost by treating sucrose with a microorganism capable of producing an **enzyme** for converting sucrose into trehalose [e.g. Corynebacterium sp. FS637 (FERM P-16384) and Arthrobacter sp. FK13 (FERM P-16383)], its cell or treated cell in the presence of a heavy metal ion such as Ni<SP>2+</SP>, Co<SP>2+</SP> or Sn<SP>2+</SP> independent of inorganic **phosphoric** acid and/or **phosphoric** acid salt, thereby converting sucrose into trehalose.

L31 ANSWER 3 OF 4 CABA COPYRIGHT 2006 CABI on STN
ACCESSION NUMBER: 96:100685 CABA
DOCUMENT NUMBER: 19961405597
TITLE: Calcium bioavailability
AUTHOR: Soares, J. H., Jr.; Ammerman, C. B. [EDITOR]; Baker, D. H. [EDITOR]; Lewis, A. J. [EDITOR]

CORPORATE SOURCE: Department of Animal Sciences, University of Maryland, College Park, Maryland 20740, USA.
SOURCE: Bioavailability of nutrients for animals: amino acids, minerals, and vitamins, (1995) pp. 95-118. 112 ref.
Publisher: Academic Press. San Diego
ISBN: 0-12-056250-2
PUB. COUNTRY: United States
DOCUMENT TYPE: Book; Book Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19960814
Last Updated on STN: 19960814

AB The importance of calcium as a component of the skeleton and in cellular metabolism, blood clotting, **enzyme** activation and neuromuscular action is discussed in relation to the often poor availability or deficiency of Ca in practical diets fed to livestock, unless supplemented. Bioavailability studies are reviewed with particular reference to experiments in chickens, quail, rats and ruminants. Factors influencing bioavailability are examined in relation to dietary and animal factors. A table is presented summarizing the bioavailability of Ca in a wide range of sources in chickens, pigs, cattle, sheep, goats, horses and rats. Feedstuffs that are considered to have relative Ca bioavailability values for ruminants and non-ruminants of 95% or more compared with calcium carbonate include aragonite, bone **meal**, calcium gluconate, dicalcium phosphate, ground **egg shell**, ground limestone, ground oyster shell, calcium sulfate, non-fat dried milk and tricalcium phosphate. When compared with dried skim milk, calcium **lactate**, calcium carbonate, chelated Ca and oyster shell had relative bioavailabilities of 100%. Slightly less available (85 to 95%) but still considered good Ca sources are lucerne hay, defluorinated phosphate, low-fluorine rock phosphate, anhydrous calcium chloride, calcium citrate and soyabean **meal**. However, high-oxalate lucerne can have significantly lower Ca availability for horses. Feedstuffs having generally less than 80% Ca bioavailability include calcium oxalate, dolomitic limestone, soft rock phosphate and grass hays such as rye, timothy and orchard grass.

L31 ANSWER 4 OF 4 CABA COPYRIGHT 2006 CABI on STN
ACCESSION NUMBER: 77:66606 CABA
DOCUMENT NUMBER: 19761443346
TITLE: Ensiling fresh animal feedingstuffs for mink
Ensilering av farskt animaliskt foder till mink
AUTHOR: Johansson, A. H.
CORPORATE SOURCE: Lantbrukshogskolan, Uppsala, Sweden.
SOURCE: Vara Palsdjur, (1976) Vol. 47, No. 4; 5/6, pp. 106...109; 132-134. 7 ref.
ISSN: 0042-2703
DOCUMENT TYPE: Journal
LANGUAGE: Swedish
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

AB Of the several methods used to ensile feedingstuffs the commonest is with acid. Growth of bacteria is inhibited at pH about 4, but moulds continue to grow to a pH of between 1 and 2. Another common method is by addition of sodium bisulphite, but it is not recommended for feed for mink, because it involves destruction and consequent deficiency of thiamin. The third common method is to ensile with added carbohydrate, which aims at production of **lactic** acid, but, if air is not

excluded, may produce acetic and butyric acid instead. Conservation of feedingstuffs for mink means conservation of feedingstuffs of animal origin and may be by addition of molasses or a cereal **meal** with a 'starter' of the desired bacteria. In Finland molassed beet slices or cereal **meals** are used; they give silage of a firm consistency. In Denmark acid, sulphuric, formic or hydrochloric, had been used successfully. Addition of an antioxidant prevents rancidity of the fat. The results of feeding trials are discussed. The most important raw material for mink is fish **waste**; **poultry waste** is used also. Cold storage is good, but expensive. Acid conservation inhibits the destructive **enzyme** thiaminase and is held by some to improve digestibility of carbohydrate. Quality of silage is judged from chemical and bacteriological analysis. Total volatile N and free fatty acids measure the breakdown of protein and fat; good silage should have a peroxide value near zero. Containers suitable for use with small amounts of silage are old oil barrels lined with plastic bags, but they are difficult to keep clean. Plastic containers are simpler in use, but possibly too expensive. Costs of setting up and maintaining a cold storage system and of ensiling are estimated. Finally the digestibility of carbohydrate in silage and the effect of ensiling on the 'concentration', DM content, of feed are discussed.

FILE 'HOME' ENTERED AT 16:17:01 ON 07 MAR 2006

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=> d his ful

     (FILE 'CAPLUS' ENTERED AT 14:41:39 ON 07 MAR 2006)
                DEL HIS Y

     FILE 'REGISTRY' ENTERED AT 15:01:10 ON 07 MAR 2006
                E KERATINASE/CN 5
L1              8 SEA ABB=ON  PLU=ON  (KERATINASE/CN OR "KERATINASE (BACILLUS
                  LICHENIFORMIS GENE KERB)"/CN OR "KERATINASE (BACILLUS
                  LICHENIFORMIS STRAIN ATCC 53737 GENE KERA)"/CN OR "KERATINA
                  SE (MICROSPORUM CANIS GENE MEP3 PRECURSOR)"/CN OR "KERATINA
                  SE (MICROSPORUM CANIS GENE MEP3)"/CN OR "KERATINASE
                  (NOCARDIOPSIS STRAIN TOA-1 GENE NAPA PRECURSOR)"/CN OR
                  "KERATINASE (NOCARDIOPSIS STRAIN TOA-1)"/CN OR "KERATINASE
                  (TRICHOPHYTON)"/CN)
                E PROTEASE/CN 5
L2           1639 SEA ABB=ON  PLU=ON  PROTEASE ?/CN
                E PROTEINASE/CN
L3           4960 SEA ABB=ON  PLU=ON  PROTEINASE ?/CN
L4           6407 SEA ABB=ON  PLU=ON  L1 OR L2 OR L3
                E PHOSPHORIC ACID/CN 5
L5              1 SEA ABB=ON  PLU=ON  "PHOSPHORIC ACID"/CN
                E LACTIC ACID/CN 5
L6              1 SEA ABB=ON  PLU=ON  "LACTIC ACID"/CN
L7              2 SEA ABB=ON  PLU=ON  L5 OR L6

     FILE 'CAPLUS' ENTERED AT 15:02:21 ON 07 MAR 2006
L8        1197102 SEA ABB=ON  PLU=ON  L4 OR ENZYM## OR KERATINASE OR
                  KERATINOLYTIC OR PROTEASE OR PROTEINASE

L9          37044 SEA ABB=ON  PLU=ON  L8 AND (L7 OR LACTIC OR LACTATE OR
                  PHOSPHORIC OR ((DIHYDROGEN OR (H OR HYDROGEN))(W)PHOSPHATE)
                  (5A)(MONOSODIUM OR SODIUM OR NA))
L10            27 SEA ABB=ON  PLU=ON  L9 AND ((SLAUGHTERHOUSE OR SLAUGHTER
                  OR ABATTOIR OR POULTRY OR TURKEY OR CHICKEN OR (GALLUS OR
                  G)(W)(GALLUS OR DOMESTIC?) OR FOWL OR MELEAGRIDINAE OR
                  DUCK)(S)(WASTE OR CARCASS?) OR EGGSHELL OR EGG(3A)(SUBSTANC
                  E OR SHELL))
L11            18 SEA ABB=ON  PLU=ON  L9 AND ((PROTEIN OR SOYABEAN OR
                  SOYBEAN OR (SOYA OR SOY)(W)BEAN OR PEANUT)(5A)WASTE)
L12            41 SEA ABB=ON  PLU=ON  L10 OR L11
L13             4 SEA ABB=ON  PLU=ON  L12 AND (EXTRUD? OR EXTRUS? OR EMULS?
                  OR PELLET? OR (HEAT? OR SPRAY?)(5A)(DRIED OR DRY?) OR
                  GRIND?)

     FILE 'REGISTRY' ENTERED AT 15:55:26 ON 07 MAR 2006

     FILE 'CAPLUS' ENTERED AT 15:55:26 ON 07 MAR 2006
                D QUE
                D L13 1-4 .BEVSTR

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
     JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB' ENTERED AT 15:55:57
     ON 07 MAR 2006
L14             8 SEA ABB=ON  PLU=ON  L13
L15             8 DUP REM L14 (0 DUPLICATES REMOVED)
                D 1-8 IBIB ABS

     FILE 'HOME' ENTERED AT 16:00:37 ON 07 MAR 2006
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     FILE 'CAPLUS' ENTERED AT 16:04:53 ON 07 MAR 2006
L16       27574 SEA ABB=ON  PLU=ON  L8(L)(L7 OR LACTIC OR LACTATE OR
                PHOSPHORIC OR ((DIHYDROGEN OR (H OR HYDROGEN))(W)PHOSPHATE)
                (5A)(MONOSODIUM OR SODIUM OR NA))
L17          13 SEA ABB=ON  PLU=ON  L16(L)((SLAUGHTERHOUSE OR SLAUGHTER OR
                ABATTOIR OR POULTRY OR TURKEY OR CHICKEN OR (GALLUS OR
                G)(W)(GALLUS OR DOMESTIC?) OR FOWL OR MELEAGRIDINAE OR
                DUCK)(S)(WASTE OR CARCASS?) OR EGGSHELL OR EGG(3A)(SUBSTANC
                E OR SHELL))
L18           6 SEA ABB=ON  PLU=ON  L16(L)((PROTEIN OR SOYABEAN OR SOYBEAN
                OR (SOYA OR SOY)(W)BEAN OR PEANUT)(5A)WASTE)
L19          17 SEA ABB=ON  PLU=ON  (L17 OR L18) NOT L13
                D KWIC
L*** DEL      0 S L19 AND DARLING ?/AU
                D KWIC 2
L20          13 SEA ABB=ON  PLU=ON  L19 NOT (PY=>2003 OR 20030630)
                D QUE L19
                D L20 1-13 .BEVSTR

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
     JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB' ENTERED AT 16:08:15
     ON 07 MAR 2006
L21          20 SEA ABB=ON  PLU=ON  L18
L22          53 SEA ABB=ON  PLU=ON  L17
L23          72 SEA ABB=ON  PLU=ON  L21 OR L22
L24          66 SEA ABB=ON  PLU=ON  L23 NOT L14
L25          42 DUP REM L24 (24 DUPLICATES REMOVED)
                D KWIC
L*** DEL      0 S L24 AND "DARLING J"?/AU
                D KWIC
L26           0 SEA ABB=ON  PLU=ON  L25 AND EMULS?
L27           0 SEA ABB=ON  PLU=ON  L25 AND EXTRUD?
                D KWIC L25 4
L28           2 SEA ABB=ON  PLU=ON  L25 AND PRESERV?
                D KWIC
L29           2 SEA ABB=ON  PLU=ON  L25 AND (MIDS OR MEAL)
                D KWIC
                D KWIC 2
L30           0 SEA ABB=ON  PLU=ON  L25 AND PELLET?
L31           4 SEA ABB=ON  PLU=ON  L28 OR L29
                D L31 1-4 IBIB ABS

     FILE 'HOME' ENTERED AT 16:17:01 ON 07 MAR 2006


     FILE REGISTRY
     Property values tagged with IC are from the ZIC/VINITI data file
     provided by InfoChem.

     STRUCTURE FILE UPDATES:    6 MAR 2006  HIGHEST RN 876011-49-3
     DICTIONARY FILE UPDATES:   6 MAR 2006  HIGHEST RN 876011-49-3

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

     TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

       Please note that search-term pricing does apply when
       conducting SmartSELECT searches.

                    Searcher    :     Shears     571-272-2528
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* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMI for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

FILE CAPLUS

FILE COVERS 1907 - 7 Mar 2006 VOL 144 ISS 11
FILE LAST UPDATED: 6 Mar 2006 (20060306/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply They are available for your review at:

http://www.cas.org/infopolicy.html

FILE MEDLINE
FILE LAST UPDATED: 4 MAR 2006 (20060304/UP). FILE COVERS 1950 TO DAT

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.ht
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

Searcher : Shears 571-272-2528

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 1 March 2006 (20060301/ED)

FILE EMBASE
FILE COVERS 1974 TO 3 Mar 2006 (20060303/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE WPIDS
FILE LAST UPDATED: 2 MAR 2006 <20060302/UP>
MOST RECENT DERWENT UPDATE: 200615 <200615/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
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>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
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http://scientific.thomson.com/support/products/dwpi/

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>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

FILE CONFSCI
FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

CSA has suspended updates until further notice.

FILE SCISEARCH

FILE COVERS 1974 TO 2 Mar 2006 (20060302/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE JICST-EPLUS
FILE COVERS 1985 TO 7 MAR 2006 (20060307/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE JAPIO
FILE COVERS APR 1973 TO OCTOBER 27, 2005

>>> GRAPHIC IMAGES AVAILABLE <<<

>>> NEW IPC8 DATA AND FUNCTIONALITY NOT YET AVAILABLE IN THIS FILE. USE IPC7 FORMAT FOR SEARCHING THE IPC. WATCH THIS SPACE FOR FURTHE DEVELOPMENTS AND SEE OUR NEWS SECTION FOR FURTHER INFORMATION ABOUT THE IPC REFORM <<<

FILE CABA
FILE COVERS 1973 TO 2 Mar 2006 (20060302/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

The CABA file was reloaded 7 December 2003. Enter HELP RLOAD for deta

FILE AGRICOLA

FILE COVERS 1970 TO 3 Mar 2006 (20060303/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE VETU
FILE LAST UPDATED: 02 JAN 2002 <20020102/UP>
FILE COVERS 1983-2001

FILE VETB
FILE LAST UPDATED: 25 SEP 94 <940925/UP>
FILE COVERS 1968-1982

FILE HOME